Bellcore
Bell Communications Research

Michael S. Slomin
Senior Attorney

January 17, 1992

Donna R. Searcy
Secretary,
Federal Communications Commission
1919 M Street, N.W., Suite 222
Washington, D. C. 20554

Dear Ms. Searcy:

Re: Administration of the North American Numbering Plan
DA 91-1307

Pursuant to Common Carrier Bureau Public notice, DA 91-1307, October 18, 1991, on behalf of Bell Communications Research, Inc. (Bellcore), as Administrator of the North American Numbering Plan, please find enclosed an original and six copies of its "Reply of Bell Communications Research, Inc. (Bellcore) as Administrator of the North American Numbering Plan" in the above proceeding.

Please stamp and return one copy to confirm your receipt. Please communicate with me should you have any questions concerning this matter.

Sincerely,

Michael S. Slomin

Enclosures

290 W. Mt. Pleasant Avenue
Room LCC-2B336
Livingston, New Jersey 07039
201 740 6390

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D. C. 20554

Petition of the	)	
	)	
National Association of Regulatory Utility Commissioners (NARUC)	)	DA 91-1307
	)	
Seeking Institution of an FCC Inquiry Related to the North American Numbering Plan	)	

REPLY OF BELL COMMUNICATIONS RESEARCH, INC. (BELLCORE) AS ADMINISTRATOR OF THE NORTH AMERICAN NUMBERING PLAN

By Public Notice of October 18, 1991, the Commission solicited comment on the request of the National Association of Regulatory Utility Commissioners ("NARUC") that the FCC institute an inquiry relating to the North American Numbering Plan ("NANP"). Bellcore, as administrator of the NANP (hereafter, "NANPA") filed comments on December 20, 1991 describing its NANP administration activities. Some twenty-five other parties also filed comments.

NANPA explained that it performs its NANP administration activities in a fair, even-handed fashion that, by intent and in practice, conserves limited numbering resources on behalf of the industry and the public, and does not competitively advantage its owners over others. NANPA demonstrated that there is no basis for the theoretical concerns -- that appear to underlie the NARUC request -- that NANPA might not adequately seek to minimize costs and conserve numbering resources, that NANPA might improperly

confer competitive advantages on its owners, or that NANPA is not considering the needs of all sectors of telecommunications. Thus, NANPA concluded that there is no need for an inquiry to address these baseless concerns.1/

Significantly, while several comments question certain of NANPA's decisions and actions, and proffer these questions as a justification for institution of an inquiry, they present no circumstance in which NANPA has favored Bellcore's owners competitively or failed to discharge its responsibilities as administrator of the NANP. Although NANPA operates "in a fishbowl," with decisions such as those that have been questioned a matter of public record,2/ to dispel any misimpressions that might be created we address several of the charges that are clearly incorrect.3/

1/ Although NANPA urged that an inquiry would be inappropriate if based on the false premise that these problems in fact are arising, it concluded that a numbering-related inquiry could prove salutary as a means of informing sectors of the industry and regulators of pending proposals and issues, citing the FCC's analogous ISDN inquiry of the mid-1980's, Integrated Services Digital Networks, 98 FCC2d 249, 252-53 (1984), as a model. NANPA emphasized, however, the importance of structuring any such inquiry so that it does not impede the ability of the industry to plan for and implement changes that are needed during its pendency, i.e., to relieve exhaustion of CIC and NPA codes.

2/ NANPA works with the industry in domestic and international standards bodies, in forums such as the Industry Carriers Compatibility Forum (ICCF), and by publicizing its proposals and soliciting industry comment on them. NANPA decisions are public and can be challenged in the informal industry bodies and before regulators.

3/ NANPA's failure to comment on other charges at this time does not indicate agreement with them or acceptance of their validity. Rather, it is only a recognition that the purpose

Reclamation of Merger and Acquisition CICs. MCI claims that NANPA's request for the return of CICs in excess of three obtained through mergers and acquisitions indicates "a clear propensity" to favor Bellcore's owners when contention arises over limited resources (MCI comments, 5). MCI fails to mention that under CIC conservation procedures that became effective in 1989 as part of the CIC assignment guidelines that were developed by the industry, holders of excess codes obtained by merger and acquisition were to make good faith efforts to return them within two years. MCI and others who held such codes should therefore have returned codes by March 20, 1991, when that period ended. In seeking return of CICs -- including MCI's 16 merger and acquisition CICs, by far the greatest number held by any entity -- NANPA was fulfilling its responsibility to administer the guidelines as written.4/

Number Resources for Paging and Mobile Services. Telocator claims that paging carriers have been denied access to additional 800-NXX codes (Telocator comments, 4). It should be emphasized that sixteen 800-NXX codes have been designated for paging use for years, and this designation has proven adequate. The paging 800-NXXs are special in that they are not unique nationwide, which has led to efficiencies in their use. Only one time was NANPA

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of commenting at this stage of the proceeding is to help the Commission decide whether to institute an inquiry, and not to flesh out the record on each and every allegation made, no matter how baseless.

4/ Indeed, NANPA's informal efforts to convince exchange carriers, including Bellcore's owners, to accelerate their CIC expansion plans probably increased the cost of these efforts. This is hardly action that favors the owners.

specifically asked to make available additional 800-NXX codes because of unique circumstances associated with an NPA split in the metropolitan Boston area and potential exhaustion of the existing paging 800-NXX codes there. The carriers there (LEC and paging) resolved this request through financial arrangements and the request for an 800-NXX was abandoned.

Both Telocator and McCaw claim that mobile calls are routed inefficiently because of numbering. Telocator does not, however, state what numbering approaches would have satisfied it. (Telocator comments, 6-7) In contrast, McCaw claims that mobile service access codes (SACs) would have improved mobile call routing, but that requests for mobile service access codes (SACs) are "met with skepticism and delay" (McCaw comments, 3). NANPA's consistent position has been that a request for a separate SAC would be entertained and evaluated if the mobile services sector of the industry -- which includes not only Telocator and its members, but also others -- made such a request. While the concept has been discussed periodically, no such request has been made. It appears that the mobile industry is divided, with some participants favoring a separate SAC to identify their numbers while others favor associating their numbers with the geography of conventional NPAs.5/

5/ This internal division is exemplified by the different treatment of the claimed "inefficient routing" problem in the Telocator and McCaw comments -- both of which were prepared by the same attorneys.

More broadly, Telocator claims that mobile carriers are not part of the numbering planning process, and that they are treated unfairly by exchange carriers in obtaining NXXs (Telocator comments, 4-5). McCaw claims NANPA proceeds from a wireline perspective that is closed to providers of mobile services (McCaw comments, 2-5). However, neither of these parties acknowledge that many of their complaints relate to the assignment of NXXs -- which NANPA does not administer.6/

NANPA has recognized the importance of involving mobile carriers in the numbering planning process because inefficiencies in assignment or use of numbering resources that NANPA does not administer (such as NXXs) can affect the resources that it does administer (such as NPAs)7/ and has taken significant steps to further this, including participating with the Wireless

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6/ For example, Telocator's complaints about the requirements that some exchange carriers allegedly impose for them to obtain new NXX codes (Telocator comments, 5-6) are irrelevant to NANPA's activities. NANPA does not administer the assignment of NXX codes.

7/ McCaw, for example, refers to the recent 212 NPA split in New York (McCaw comments, 5). While NANPA assigned the NPA to relieve 212, the local carrier planned for its introduction and use, not NANPA. The cellular and paging carriers argued before the New York Public Service Commission (NYPSC) that the local exchange carrier had failed to adequately address their needs. Because issues arose that could adversely affect nationwide numbering policies and procedures, NANPA intervened in the NYPSC proceeding as an expert, and in the course of participating in this proceeding it became clear to NANPA that coordination among those potentially affected by numbering changes is necessary. Because of this, NANPA endorsed the resolution of the proceeding by an agreement among the parties that, among other things, established a coordination group that is to meet and discuss future New York numbering changes well in advance of their implementation.

Interconnection Forum and soliciting comment and input from the mobile sector of the industry on NANPA initiatives such as its Long Term Numbering Proposal and its efforts to prepare proposed Central Office Assignment Guidelines (see below).

Long Term Numbering Proposal. The Commission should be aware that NANPA has published its Long Term Numbering Proposal, a copy of which is attached to this filing.8/ NANPA is now discussing it with various industry sectors and participants, and in industry forums, as part of the process of soliciting comment and suggestions for change.

The proposal itself, and the process by which it will be refined and adjusted, should lay to rest many of the concerns about future issues expressed in comments herein. For example, it is proposed that a sizable number of the 640 additional NPA codes that are to become available in 1995 be reserved for personal communications services (PCS).

Also, the proposal recognizes the concern of some industry participants, reflected in several comments herein, that segments other than local exchange carriers may not have an adequate voice in numbering issues or that NANPA has had to itself resolve issues that could not be resolved in industry forums without input from others (subject, of course, to regulatory review). NANPA has proposed formation of an NANP Advisory Council, composed of members from involved industry sectors, to advise NANPA on numbering

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8/ This was anticipated in NANPA's December 20, 1991 comments. NANPA comments, 4, n. **.

issues. NANPA believes that such a focused group could help address and successfully resolve many of today's open numbering issues, by allaying mistrust and concerns about motives.

We are asking the industry to provide comments on the proposal by April 30, 1992, after which NANPA will work to resolve any disagreements and revise the document so that it represents industrywide consensus (to the extent that consensus is reached).

Central Office Code Assignment Guidelines. At the request of the Commission, NANPA has begun an industrywide effort to develop recommended guidelines on the assignment of NXX codes for the Commission's consideration. NANPA is preparing draft assignment guidelines to serve as a basis for discussion which it anticipates distributing to the industry in February. NANPA will use this draft as a basis for soliciting comment and recommendations from all interested sectors of the industry, much as it is doing with the Long Term Numbering Proposal. We have every reason to be hopeful that the result of this process will be a set of guidelines on which there is broad industry consensus, but if not the Commission can resolve any disagreements that remain.

Recommendation

NANPA recommends that the Commission consider holding this proceeding in abeyance pending the industry's informal action on the Long Term Numbering Proposal and the initial draft NXX assignment guidelines that are to be distributed next month. The proposals in both of these address many of the concerns expressed in comments herein as a basis for instituting an inquiry. Thus,

an inquiry may prove unnecessary. Rather than engendering unnecessary costs, delays and the inevitable counterproductive posturing that occurs in formal legal proceedings, it would seem advisable to promote informal processes within the industry that can resolve many of the difficult and complex issues implicit in numbering.

Respectfully submitted,

BELL COMMUNICATIONS RESEARCH

by: 

Michael S. Slomin

Its Attorney

Attachment

Michael S. Slomin
Bell Communications Research, Inc.
290 West Mount Pleasant Avenue
Livingston, New Jersey 07039
201-740-6390

January 17, 1992

CERTIFICATE OF SERVICE

I, Margaret E. Patrick, certify that a copy of the foregoing Reply of Bell Communications Research, Inc. (Bellcore) as Administrator of the North American Numbering Plan was served on this 17th day of January, 1992, by First Class United States Mail, postage prepaid, to the following persons, except where otherwise noted:

Richard M. Firestone (by hand)
Chief, Common Carrier Bureau
Federal Communications Commission
1919 M Street, N.W., Room 500
Washington, D. C. 20554

Peyton Winns
Chief, Industry Analysis Division
Common Carrier Bureau,
Federal Communications Commission
1919 M Street, N.W., Room 538

'ary Green (by hand)
ıdustry Analysis Division
ommon Carrier Bureau,
Federal Communications Commission
1919 M Street, N.W., Room 538
Washington, D. C. 20554

Gregory J. Vogt, Esq.
Chief, Mobile Services Division
Common Carrier Bureau,
Federal Communications Commission
1919 M Street, N.W., Room 644
Washington, D. C. 20554

Paul Rodgers, Esq.
NARUC
1102 ICC Building
12th and Constitution Avenue, N.W.
Post Office Box 684
Washington, D. C. 20044

R. Michael Senkowski, Esq.
Jeffrey S. Linder, Esq.
Wiley, Rein & Fielding
1776 K Street, N.W.
Washington, D. C. 20006
Counsel for McCaw Cellular Communications, Inc.

Mark R. Hamilton, Esq.
Marsha Olch
McCaw Cellular Communications, Inc.
5400 Carillon Point
Kirkland, Wash. 98033

R. Michael Senkowski, Esq.
Jeffrey S. Linder, Esq.
Aliza F. Katz, Esq.
Wiley, Rein & Fielding
1776 K Street, N.W.
Washington, D. C. 20006
Counsel to Telocator

A. Richard Metzger, Jr., Esq.
Rogers & Wells
1737 H Street, N.W.
Washington, D. C. 20006-3922
Counsel for Telecom Canada

Martin T. McCue, Esq.
U. S. Telephone Association
900 19th Street, N.W., Suite 800
Washington, D. C. 20006-2105

Carol Schultz, Esq.
MCI Communications Corporation
1801 Pennsylvania Avenue, N.W.
Washington, D. C. 20006

Francine J. Berry, Esq.
Mark C. Rosenblum, Esq.
Albert M. Lewis, Esq.
American Telephone and Telegraph Co.
295 North Maple Avenue, Rm. 3244J1
Basking Ridge, N. J. 07920-1002

>y L. Morris, Esq.
1lnet Communications Services, Inc.
1990 M Street, N.W., Suite 500
Washington, D. C. 20036

Robert C. Atkinson
Teleport Communications Group
1 Teleport Drive, Suite 301
Staten Island, New York 10311-1011

Jay C. Keithley, Esq.
Leon Kestenbaum, Esq.
United Telecommunications, Inc.
1850 M Street, N.W., Suite 1100
Washington, D. C. 20036

W. Richard Morris, Esq.
United Telecommunications, Inc.
Post Office Box 11315
Kansas City, Missouri 64112

Josephine S. Trubek, Esq.
Michael J. Shortley, III, Esq.
Rochester Telephone Corporation
180 South Clinton Avenue
?ochester, New York 14646

Daniel L. Bart, Esq.
GTE Service Corporation
1850 M Street, N.W., Suite 1200
Washington, D. C. 20036

Lawrence E. Sarjeant, Esq.
James T. Hannon, Esq.
U S WEST Communications, Inc.
1020 19th Street, N.W., Suite 700
Washington, D. C. 20036

Durward D. Dupre, Esq.
Richard C. Hartgrove, Esq.
John Paul Walters, Jr., Esq.
Southwestern Bell Telephone Co.
1010 Pine Street, Room 2114
St. Louis, Missouri 63101

James P. Tutill, Esq.
Nancy C. Woolf, Esq.
Pacific Bell and Nevada Bell
140 New Montgomery Street, Rm. 1523
San Fancisco, Calif. 94105

Stanley J. Moore, Esq.
Pacific Bell and Nevada Bell
1275 Pennsylvania Avenue, N.W.
Washington, D. C. 20004

Mary McDermott, Esq.
Campbell L. Ayling, Esq.
NYNEX Telephone Companies
120 Bloomingdale Road
White Plains, New York 10605

Floyd S. Keene, Esq.
Larry A. Peck, Esq.
Ameritech Operating Companies
2000 W. Ameritech Center Drive
Hoffman Estates, Ill. 60196-1025

William B. Barfield, Esq.
Thompson T. Rawls II, Esq.
BellSouth Corporation
1155 Peachtree St., N.E., Suite 1800
Atlanta, Georgia 30367-6000

Theodore D. Frank, Esq.
Vonya B. McCann, Esq.
Arent Fox Kintner Plotkin & Kahn
1050 Connecticut Avenue, N.W.
Washington, D. C. 20036-5339
Counsel for Centel Corporation

A. A. Kurtze
Centel Corporation
8725 Higgins Road
Chicago, Ill. 60631

Andrew D. Lipman, Esq.
Russell M. Blau, Esq.
Swidler & Berlin, Chartered
3000 K Street, N.W.
Washington, D. C. 20007
Counsel for Metropolitan Fiber Systems, Inc.

Cindy Z. Schonhaut, Esq.
Metropolitan Fiber Systems, Inc.
3000 K Street, N.W., Suite 300
Washington, D. C. 20007

Allan G. Duncan
Unitel Communications, Inc.
200 Wellington Street West
Toronto, Ontario M5V3C7, CANADA

William A. Mason
gers Cantel Inc.
York Mills Road
North York, Ontario M2P2C9, CANADA

Daryl L. Avery, Esq.
Peter G. Wolfe, Esq.
Howard C. Davenport, Esq.
Public Service Commission of the
District of Columbia
450 Fifth Street, N.W.
Washington, D. C. 20001

William E. Wyrough, Jr., Esq.
Florida Public Service Commission
Fletcher Building
101 East Gaines Street
Tallahassee, Florida 32399-0850

David Cosson, Esq.
L. Marie Guillory, Esq.
National Telephone Cooperative Assn.
2626 Pennsylvania Avenue, N.W.
Washington, D. C. 20037

Downtown Copy Center
14 21st Street, N.W.
shington, D. C. 20037

Margaret E. Patrick
Margaret E. Patrick

January 17, 1992

Bellcore
Bell Communications Research

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This IL distributes the North American Numbering Plan Administrator's Proposal On The Future Of Numbering in World Zone 1 to the telecommunications sector for review and comment by April 30, 1992.

Topical Keywords, Phrases And/Or Subjects

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To
Recipients of North American Numbering Plan (NANP) Information

Distribution
Unrestricted

From
W. M. Bialock, Assistant Vice President - Operations Applications

Abstract

This IL distributes the North American Numbering Plan Administrator's Proposal On The Future Of Numbering In World Zone 1 to the telecommunications sector for review and comment by April 30, 1992.

(Includes safety liability disclaimer (if applicable), ordering information, originator's signature information)

Bellcore, as the North American Numbering Plan administrator (NANPA), in the performance of its responsibilities as same, has felt the need for a numbering plan for the future that facilitates the evolution of telecommunications within World Zone 1 (WZ1).

The need for a near-term strategy on the appropriate allocation of the 640 new "interchangeable" NPA codes available in 1995 and a long-term plan for the evolution of numbering within WZ1, persuaded the NANPA that the future of numbering in WZ1 should be organized and planned more deliberately to reflect the emergence of new telecommunications trends. The NANPA proposal is in response to this need.

It is the NANPA goal to achieve consensus on such a plan and therefore offers the attached proposal for telecommunications sector review and comment by April 30, 1992. The complete consensus process for this proposal is contained within the last section of the plan.

Any questions pertaining to this document and its content should be directed to Fred Gaechter on 201-740-4596.

R. E. Collins

for W. M. Bialock
Assistant Vice President - Operations Applications

NORTH AMERICAN NUMBERING PLAN ADMINISTRATOR'S PROPOSAL ON THE FUTURE OF NUMBERING IN WORLD ZONE 1

January 2, 1992

This document has been prepared by North American Numbering Plan Administration for industry review. It may be copied and distributed freely.

The review period continues through April 30, 1992. Procedures for commenting on this document will be found on page 28.

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Appendices

1. Executive Summary

In its formative years, the North American Numbering Plan (NANP) required little more than ad hoc administration. Initially, the assignment of NANP resources was based on a single service (POTS [Plain Old Telephone Service]) and the addressing of geographic destinations. Consequently, there was only marginal need for a detailed numbering plan for the future - a reference document predicting the direction in which the telecommunications industry would move and proposing a complementary numbering plan that will be efficient and productive. The environment in which the telecommunications industry exists today is in dramatic contrast to the preceding decades. A numbering plan for the future that facilitates the evolution of telecommunications is now urgently required. One of the near-term events that must be addressed in this plan is the 1995 availability of 640 new "interchangeable" NPA codes. The need for a near-term strategy on the appropriate allocation of this new inventory of 640 codes and a long-term plan for the evolution of numbering within World Zone 1 (WZ1), persuaded the North American Numbering Plan Administrator (NANPA) that the future of numbering in WZ1 should be organized and planned more deliberately to reflect the emergence of new telecommunications trends. The following NANPA proposal on the future of numbering in WZ1 is in response to this need.

The proposal for the future of the NANP detailed in this document must answer at least three primary questions:

1. Is the NANP adaptable to emerging new services, architectures, and technologies?

2. Will the 10-digit format of the NANP have adequate resources to last well into the 21st century?

3. Can the NANP meet the needs of the users and providers of North American telecommunications?

The proposal detailed below leads to an affirmative response to each of these questions and constitutes the future numbering plan recommendation of the North American Numbering Plan Administrator (NANPA).

The proposal has a natural starting point - 1995, the implementation year for interchangeable NPA (Numbering Plan Area) codes. Accordingly, between now and 1995 is the critical time period during which a plan must be formulated on how the additional 640 NPA codes, gained by the implementation of interchangeable codes, should be allocated. The year 2025 is an arbitrary choice for "end of study." It is not so far in the future as to undermine the credibility of predictions but far enough removed from today to disassociate commitments to current technology, policy, and services from the development of futuristic concepts on the customers' needs from the telecommunications industry and its numbering plan. Consequently, the approximate timeframe of this proposal is 1995-2025 and beyond. The selection of the year 2025, or any other long-range planning date, is not to be construed as a prediction for the eventual exhaust of the 10-digit format of the NANP. As explained later in this document, the resources of the 10-digit format are expected to meet service needs well beyond 2025.

In order to determine the credibility of a proposed plan, there should be: 1). a set of attributes against which the plan can be compared both during its development and upon completion; 2). a list of global assumptions to establish the environment for the

development of the plan proposal; and then 3). a set of guiding principles for the assignment and use of NANP resources under the plan. The attributes, assumptions, and principles were all developed and are in Appendix C, Section 3.3, and Section 3.4, respectively.

The numbering plan proposed here consists of two major parts, the short-term plan for the allocation of NANP resources after the implementation of interchangeable NPA codes (Section 4) and the long-term goals and predictions for the telecommunications industry and the NANP (Section 5).

The most significant aspects of the short-term plan are:

- The reservation of 300 of the 640 new interchangeable NPA codes for assignment as geographic NPA codes.
- The reservation of 80 of the 640 NPA codes for non-geographic applications.
- The reservation of 80 of the 640 NPA codes for the ultimate expansion of the NANP beyond 10-digits.
- The reservation of 10 of the 640 NPA codes for additional Service Access Codes (SACs).
- The reservation of 170 of the 640 NPA codes for unidentified applications/purposes and/or growth.
- The development of administrative guidelines for the assignment and conditional recovery of codes within the set of 640 NPA codes.
- A perspective on the use of 7-digit national numbers.

The most significant long-term NANP goals are:

- The Public Switched Telephone Network (PSTN) of the future will be a "virtual seamless network."
- The use of overlay NPA codes will provide relief for geographic NPAs facing office code exhaust.
- The use of universal 10-digit dialing within the NANP.
- Public networks will interconnect, and private networks may interwork with public networks.
- The "dialing" process by which an end user accesses the public network will commonly be performed by a "smart" user-network interface.
- The telecommunications sector's agreement on an ultimate expansion plan for the NANP will apply after the exhaust of the current 10-digit format.
- The potential for numbering and dialing plan integration will be pursued after human factors and technical considerations permit.

The short-term plan is intended to evolve to include those goals of the long-term plan deemed appropriate by the telecommunications industry. The NANPA will sponsor the cooperative industry effort needed to implement the short-term plan and its evolution to the goals of the long-term plan.

The proposal also includes a recommendation to form an NANP Advisory Council (Section 9) to advise the NANPA on issues relative to the administration and design of the NANP.

This document, *The NANPA's Proposal on the Future of Numbering in WZ1*, is being widely distributed within the telecommunications sector (industry entities, associations,

affiliated agencies, regulatory bodies/committees, forums throughout WZ1) for review and comment. The 120-day comment cycle is from January 2, 1992 to April 30, 1992.

At the end of the comment cycle, the NANPA will use 60 days to review and consolidate the industry comments and incorporate those deemed appropriate into a revised proposal. Should the NANPA receive extensive contradictory comments, it will consider an industry forum for the purpose of achieving consensus on those items having contradictory opinions. If at the end of the third quarter of 1992, the industry has not achieved consensus on the major issues of contention, the NANPA will determine if there is the potential for consensus in the near-term. If so, the industry forum will continue to meet as long as there is progress toward consensus. At any point that the NANPA determines that the industry is at an impasse regarding the remaining items not having consensus, the NANP proposal, with a full report on the forum process and its result, will be issued as the view of the NANPA and forwarded to the FCC (Federal Communications Commission) and the appropriate Canadian government agency(ies).

2. Introduction

It is incumbent on planners of telecommunications services to check and recheck the infrastructure on which such services rely. One dominant feature of this infrastructure is numbering. Accordingly, this proposal addresses the present and future role of "numbering" within the North American Numbering Plan (NANP) area, with emphasis on effectiveness and adaptability. Since 1947, when area code assignments in the original NANP were first officially published, the very definition of numbering has changed. It continues to change with the evolution of the telecommunications industry itself. The following sections will define numbering as it was in the past and as it is today, and then, building on that base, offer a numbering plan proposal that looks ahead to 2025.

The proposal view begins with 1995. Over the 30-year span to be examined, the issues anticipated in or near 1995 will have a clearer focus. The early resolution of these issues has priority. A 30-year time span involves forecasts not nearly as clear. But elements such as numbering capacity can be estimated and tentative judgments recorded.

Numbering is described above as one dominant feature in the provision of most telecommunications services. Numbering does not stand alone, however, nor should it be assumed that numbering sufficiency can assure overall service viability if numbering is not embedded in a complete telecommunications service plan that optimizes the service package and its reliance on an effective and adaptable numbering plan.

The NANP and the proposals for it, contained herein, must be compatible with international telecommunications agreements. The NANP is part of the "Numbering Plan for the ISDN Era," known as CCITT's (International Telegraph and Telephone Consultative Committee) international numbering Recommendation E.164. The NANP and, consequently, any proposals recommending its future, must conform to E.164 or its successor if international services with worldwide applications are to be accommodated. Services confined to North America must not conflict with global international services.

2.1 The past and present of the NANP

The NANP was designed for the public switched network already in place and growing dynamically to meet conditions prevailing at the end of World War II. Operators had been completing long distance calls long before the introduction of standardized NANP destination codes. Beginning November 10, 1951, when Englewood, N.J. initiated Direct Distance Dialing (DDD), customers and operators were introduced to the 10-digit NANP format represented symbolically as N0/1X-NNX-XXXX[1]. Customers still maintained several supporting dialing options of which "Dial 0" was a familiar backup for any non-dialable calls. The 10-digit DDD format, however, shortened to seven digits for use within the home NPA, was the dominant new element. Although the 10-digit NANP format has been remarkably stable, prefix usage has varied. Early use of 11X+ service code access eventually gave way to 1+ access. Some cities adopted common control switching, avoiding prefix usage. Other locales employed mixed arrangements of common control and step-by-step. In 1960, prefix 0+ offered a dialable means to link DDD with operator assistance. The progression of format change is shown in Appendix A.

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[1] N=digits 2-9; X=digits 0-9; 0/1= digits 0 or 1.

Progressively, the routing of long distance calls no longer followed step-by-step tradition. Provisions to analyze clusters of digits (normally the leading three but often the leading six) were added to all key network switches. In and after 1970, the prefixes 011 and 01+ ushered in the era of international dial service. The NANP became one of the "national" components of CCITT Recommendation E.163 (now Recommendation E.164). Throughout the evolution of the NANP, capacity and adaptability were, and should continue to be, subject to ongoing scrutiny.

The title "North American Numbering Plan" is somewhat of a misnomer, since the area it serves is not geographically what is considered to be North America. For example, Mexico, part of North America, is not currently part of the NANP. Conversely, Hawaii, not technically a part of North America, is a part of the NANP. The area served by the NANP includes those jurisdictions (listed in Appendix B) described in CCITT Recommendation E.164 as World Zone 1 (WZ1). The area served by the NANP consequently equals WZ1.

2.2 The North American Numbering Plan Administrator (NANPA)

Bellcore was assigned the function of administering the North American Numbering Plan (NANP) in an amendment to the Plan of Reorganization that implemented divestiture, which Plan was entered and approved by the Modified Final Judgement (MFJ) court. Bellcore has performed the function of NANP Administrator (NANPA) since divestiture (January 1, 1984). The NANP is the numbering plan for World Zone 1 (see Section 2.1.1) which consists of Canada, the Caribbean administrations (those within NPA code 809) listed in Appendix A, and the United States. The Federal Communications Commission (FCC) has plenary jurisdiction over the administration of the NANP within the United States. In Canada, when numbering-related public policy requires clarification, the government (Department of Communications [DOC]) is consulted. The Canadian Radio-television and Telecommunications Commission (CRTC) has jurisdiction over the use of numbering resources by Canadian telecommunications carriers under its jurisdiction. Within the Caribbean basin, no central authority exists with jurisdiction over the NANP. The governments of each of the Caribbean administrations within the NANP participate in the discussion of numbering issues involving their respective countries on an "as needed basis" and voluntarily acknowledge the NANPA as "ombudsman" for their numbering needs.

The NANPA's responsibilities include the following:

- Administer the NANP resources[2] fairly and impartially to the mutual benefit of users and service providers in the entire NANP region - WZ1.
- Work cooperatively with standards bodies, industry forums, national and international organizations, and appropriate government agencies to seek and implement consensus[3] on NANP administrative procedures and design changes.

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[2] CO codes within geographic NPA codes are administered by the dominant LEC within the NPA, not the NANPA (with the exception of the 809 NPA code for the Caribbean).

[3] The consensus process referred to is that used by the NANPA whereby the telecommunications sector is requested to review and comment on NANP issues, proposals, recommendations, and decisions with the intent of building sector consensus.

- Ensure that code conservation techniques are employed in the assignment and utilization of NANP resources.
- Seek to ensure the availability of NANP resources for legitimate applications.
- Adapt the NANP to the changing requirements of the telecommunications industry users and service providers.
- Represent the NANP interests to national and global standards and telecommunications bodies.

It is with these responsibilities in mind that the NANPA developed this proposal for the future of numbering in WZ1.

2.3 Attributes of an effective numbering plan

In order to develop a credible numbering plan proposal, a set of attributes was applied that details the functions of an effective and efficient numbering plan. These attributes were considered throughout the plan development process and the final proposal was tested against them. These attributes were developed by the NANPA. They are listed and explained in Appendix C.

2.4 Functions of numbers within the NANP

Important to the development of this numbering plan proposal is an understanding of the functions intended for the numbers within the numbering plan. An analysis of the functions of numbers within the NANP is contained in Appendix D.

3. The Development of the NANPA Proposal for Future Numbering in WZ1

3.1 Purpose and scope of the proposal

In its formative years, the NANP required little more than ad hoc administration. There was only marginal need for a detailed numbering evolution plan for the future, That is, there was little need for a reference document predicting the direction in which the telecommunications industry would move and proposing a complementary numbering plan that will be efficient and productive. The environment in which the telecommunications industry exists today is in dramatic contrast to the preceding decades. A numbering plan for the future that facilitates the evolution of telecommunications is now urgently required. One of the near-term events that must be addressed in this plan is the 1995 availability of 640 new "interchangeable"[4] NPA codes (INPA). The need for a near-term strategy on the appropriate allocation of this new inventory of 640 codes and a long-term plan for the evolution of numbering in WZ1, persuaded the NANPA that the future of numbering in WZ1 should be organized and planned more deliberately to reflect the emergence of new telecommunications trends. The following NANPA proposal on the future of numbering in WZ1 is in response to this need.

The proposal for the future of the NANP detailed in this document must answer at least three primary questions:

1. Is the NANP adaptable to new technologies, architectures, and services?

2. Will the 10-digit format of the NANP have adequate resources to last well into the 21st century?

3. Can the NANP meet the emerging needs of the North American telecommunications industry and its users?

The plan detailed below enables an affirmative response to each of these questions.

The scope of the proposal on the future of numbering in WZ1 focuses primarily on the 10-digit numbering plan applicable to the PSTN in the ISDN era. There are other numbering/dialing resources centrally administered by the NANPA, such as CICs (Carrier Identification Codes), SS7 (Signaling System 7) network codes, and vertical services codes. The 10-digit format identifiable with the PSTN/ISDN, however is the hallmark and foundation of the numbering plan for North America. Other resources administered by the NANPA can arguably be classified as part of the dialing and/or service plan. Some prefixes and service access codes may be utilized in a uniform manner throughout North America. Others, such as CICs, apply in only a portion of North America. All are important, but the 10-digit customer dialable format is dominant.

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[4] The term "interchangeable" codes refers to those codes in the format NXX, where N=digits 2-9 and X=digit 0-9. Prior to the implementation of interchangeable NPA codes the NPA code format was N0/1X. The expansion of the second ("B") digit from only a 0 or a 1 to 0-9 provides 640 additional NPA codes for use in the NANP. Previously central office (CO) codes were similarly expanded from the NNX format to the NXX format. NPA codes and CO codes, after the new formats are fully implemented, have the same format (NXX), hence the term "interchangeable."